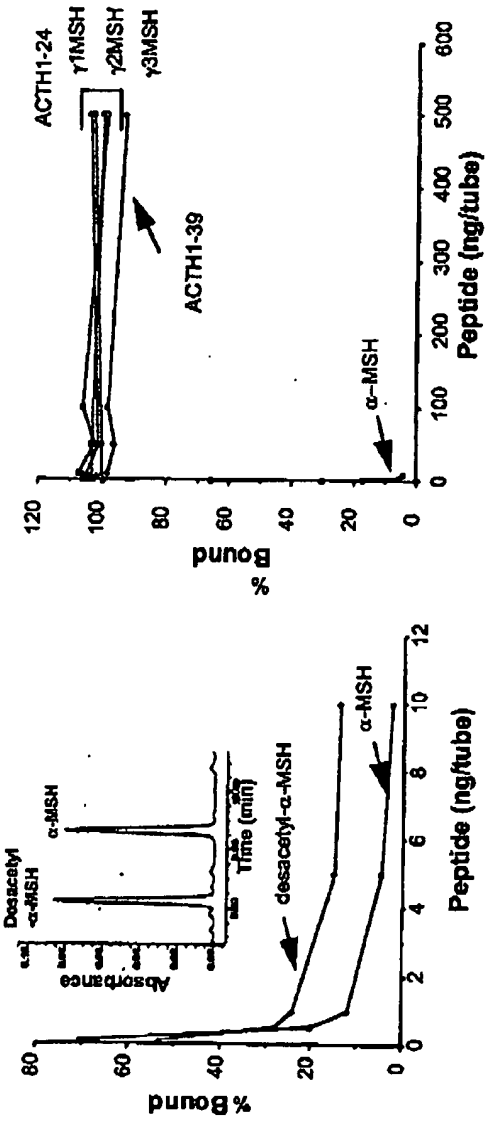


FIGURE 1

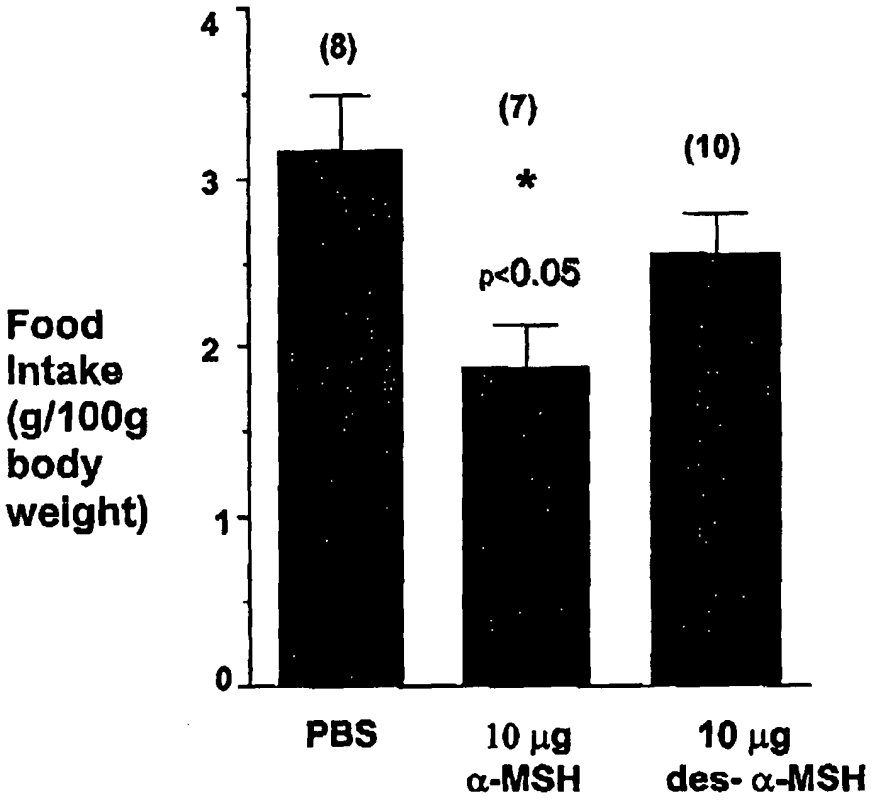

Food Intake (g/100g body weight)
4
3
2
1
0
(8)
(7)
*
p<0.05
(10)
PBS
10 µg α-MSH
10 µg des- α-MSH

Figure 2

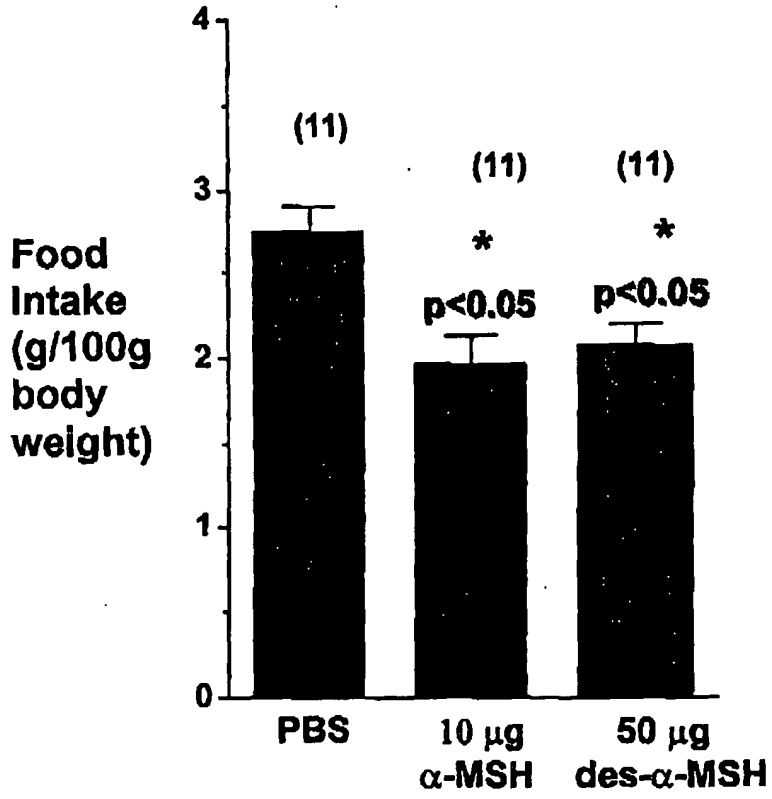

Food Intake (g/100g body weight)
4
3
2
1
0
(11)
(11)
(11)
*
*
p<0.05
p<0.05
PBS
10 µg α-MSH
50 µg des-α-MSH

Figure 3

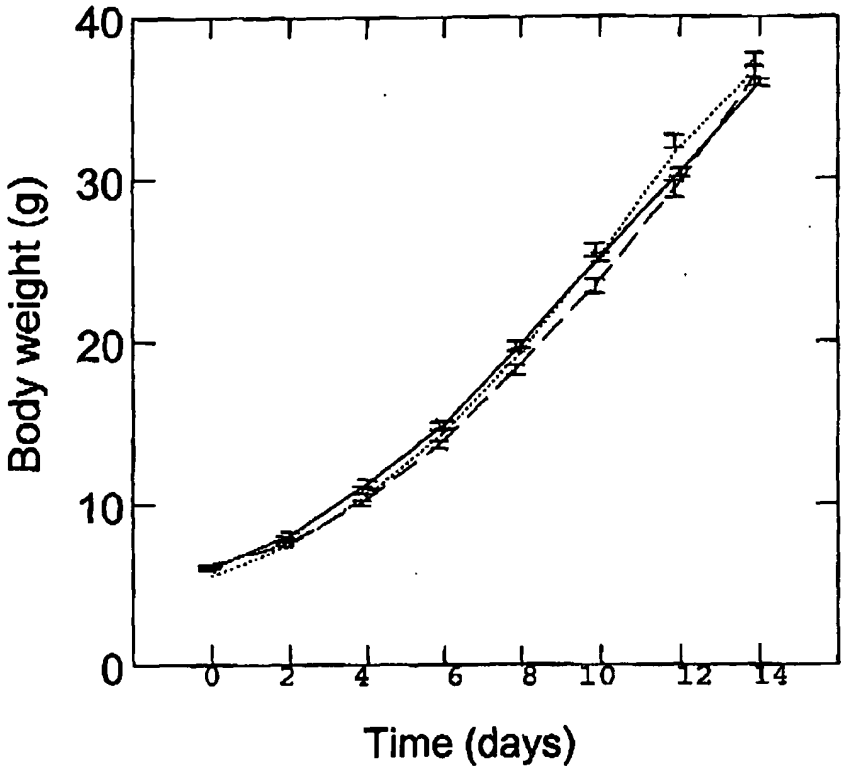


Figure 4

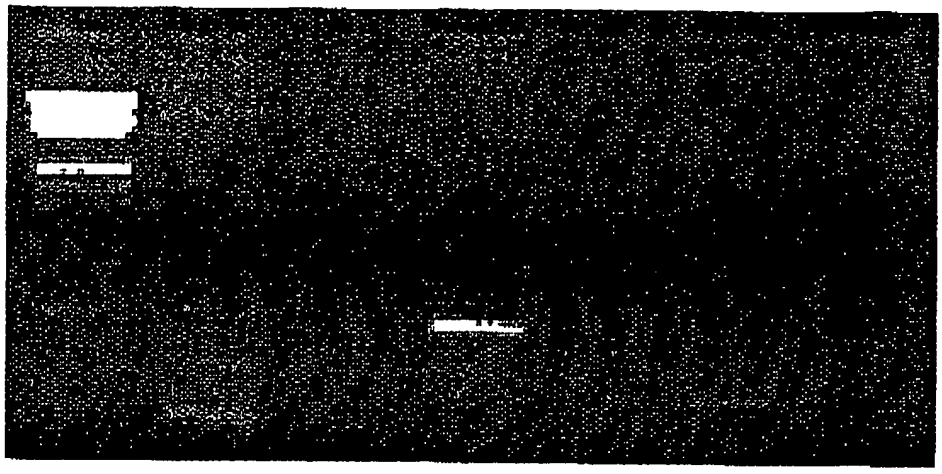


Figure 5

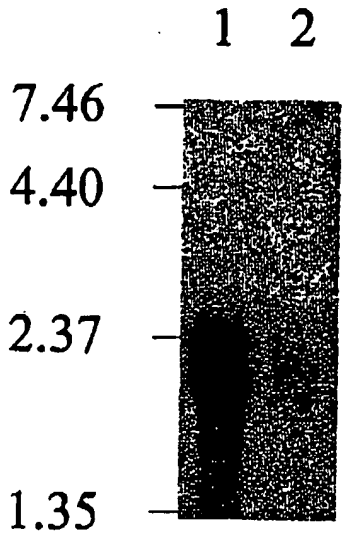


Figure 6

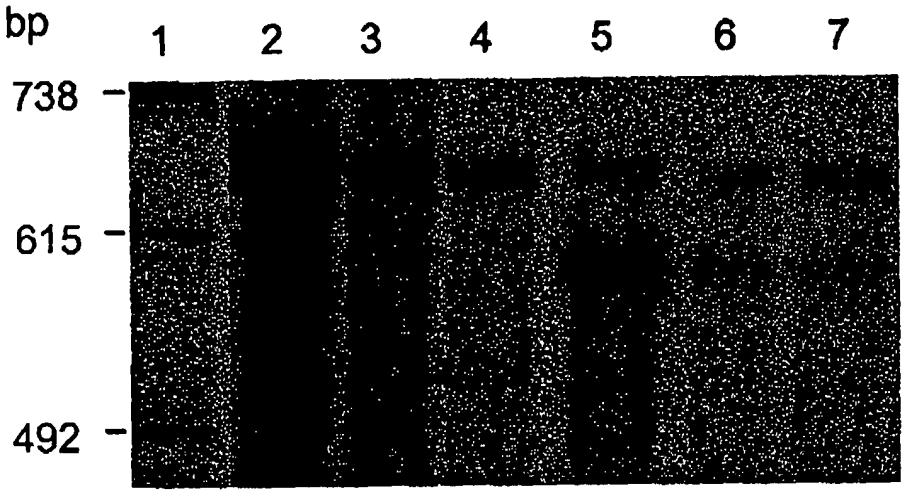
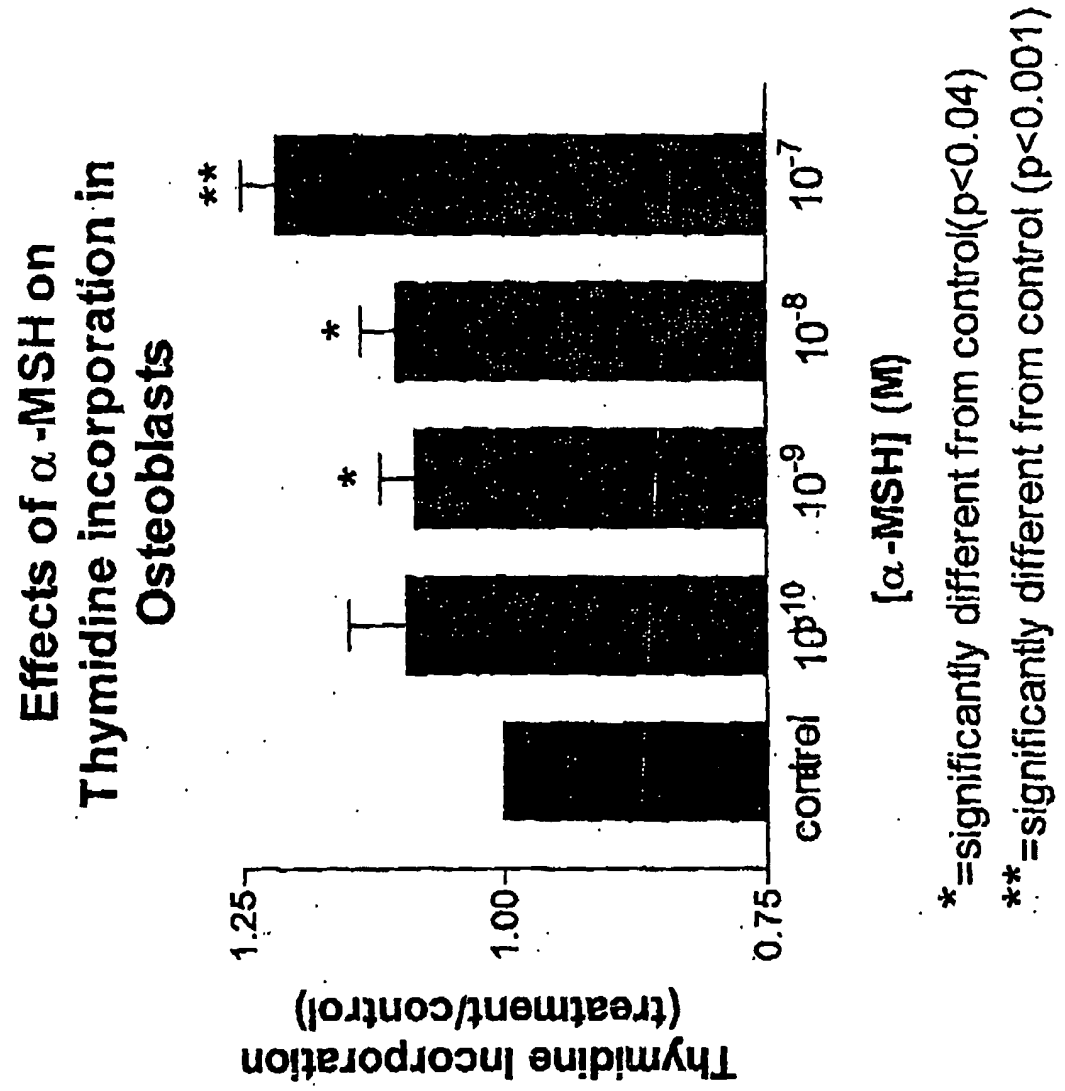
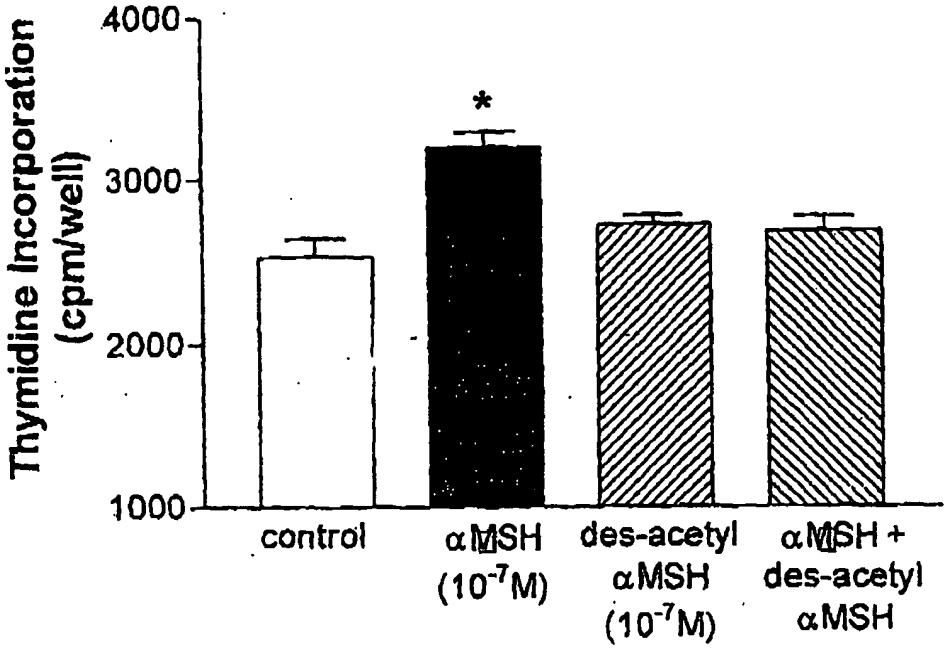


Figure 7

FIG 8.


Effects of α-MSH on Thymidine incorporation in Osteoblasts
Thymidine incorporation (treatment/control)
1.25
1.00
0.75
control
10-10
10-9
10-8
10-7
*
*
**
[α-MSH] (M)
*=significantly different from control(p<0.04)
**=significantly different from control (p<0.001)

Des-acetyl α-MSH is Antagonistic to α-MSH in Osteoblasts



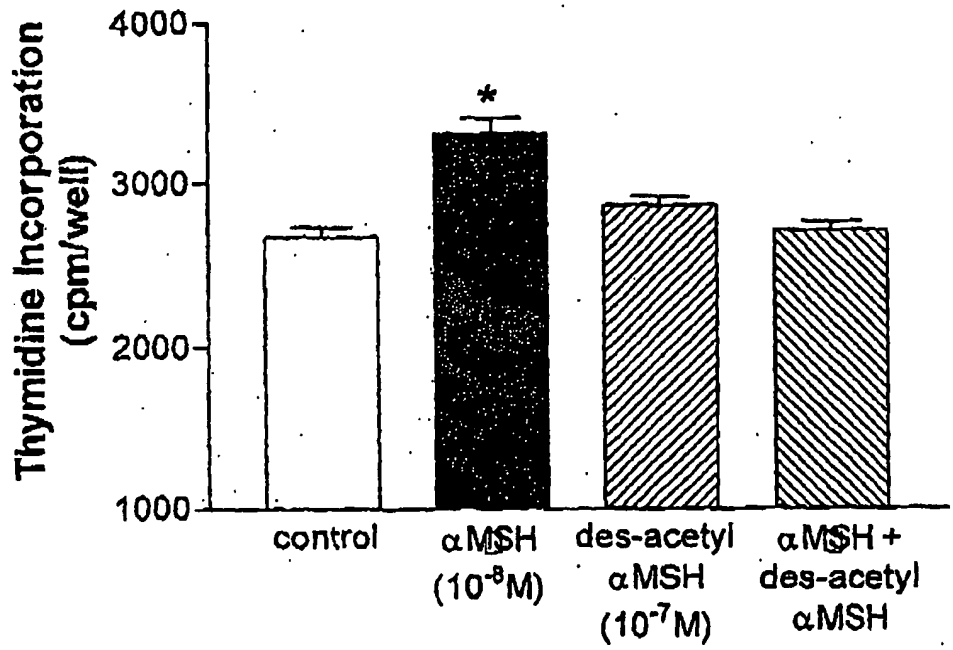


FIG 4

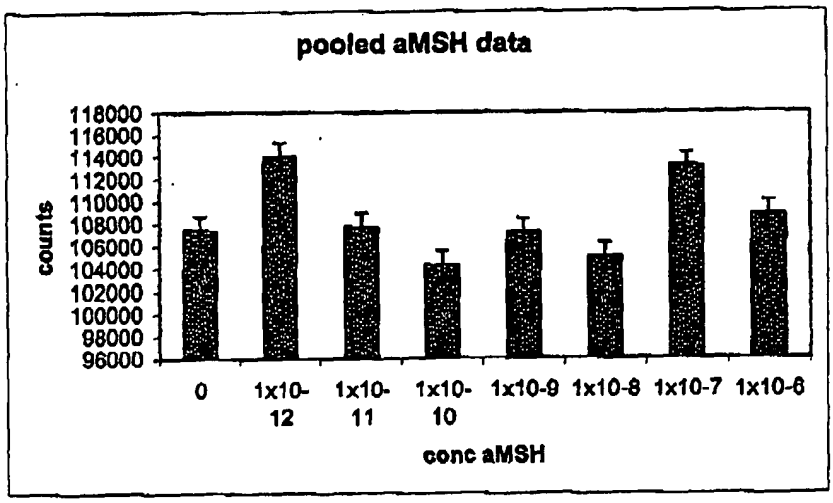

pooled aMSH data
counts
118000
116000
114000
112000
110000
108000
106000
104000
102000
100000
98000
96000
0
1x10-12
1x10-11
1x10-10
1x10-9
1x10-8
1x10-7
1x10-6
conc aMSH

Figure 10

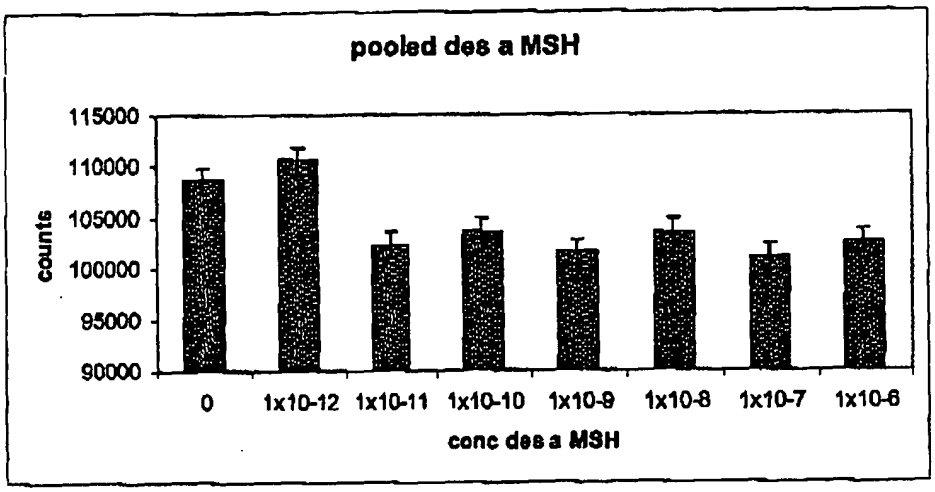

pooled des a MSH
115000
110000
105000
100000
95000
90000
counts
0
1x10-12
1x10-11
1x10-10
1x10-9
1x10-8
1x10-7
1x10-6
conc des a MSH

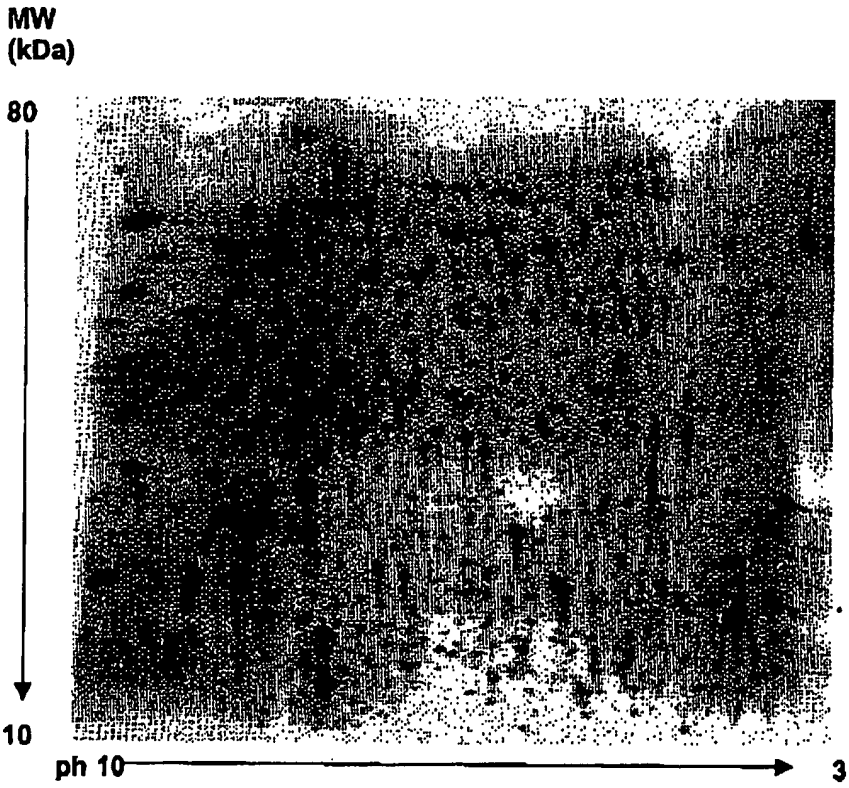
Figure 11

FIGURE 12A

Examples of proteins identified

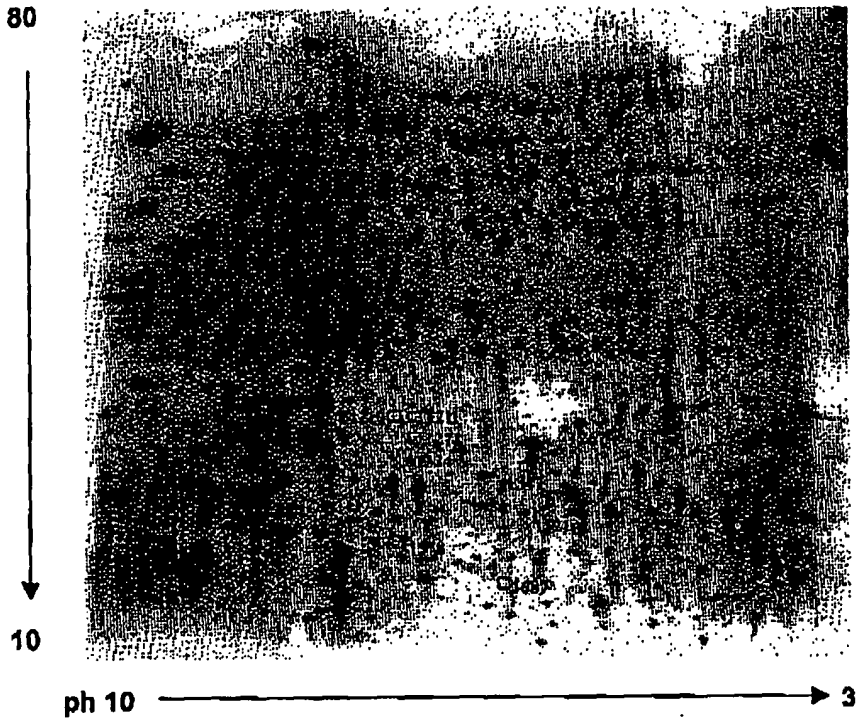
Protein	Spot no. (Fig 3,4)	α–MSH effect compared to control	des-α-MSH effect compared to control
Stress protein			
heat shock protein homologue	p1350 (3)	1.8 fold increase	
Enzymes			
Glyceraldehyde-3-phosphate-dehydrogenase	p1528 (3)	*	
	p582 (4)		*
	p1210 (4)		2.4 fold decrease
aldo-keto reductase	p582 (4)		*
citrate synthase	p582 (4)		*
creatine kinase	p706 (3)	1.7 fold increase	
pyruvate synthase alpha-chain	p86 (4)		1.6 fold decrease
f1 ATPase beta-chain	p1528 (3)	*	
Cytoskeletal proteins			
tubulin beta chain	p711 (3)	1.4 fold increase	

* Multiple proteins that appeared as a single spot on the 2D gel.



Proteins changed by α-MSH treatment *Location of proteins of interest (black-circles) on the reference gel. Numbers correspond to protein labels on the reference gel. Significant increase ($p<0.05$, Mann-Whitney U test) in protein expression in α-MSH treated group is labeled in blue, decrease in red. Underlined protein p611 expression also significantly changed in des-α-MSH treated group.*

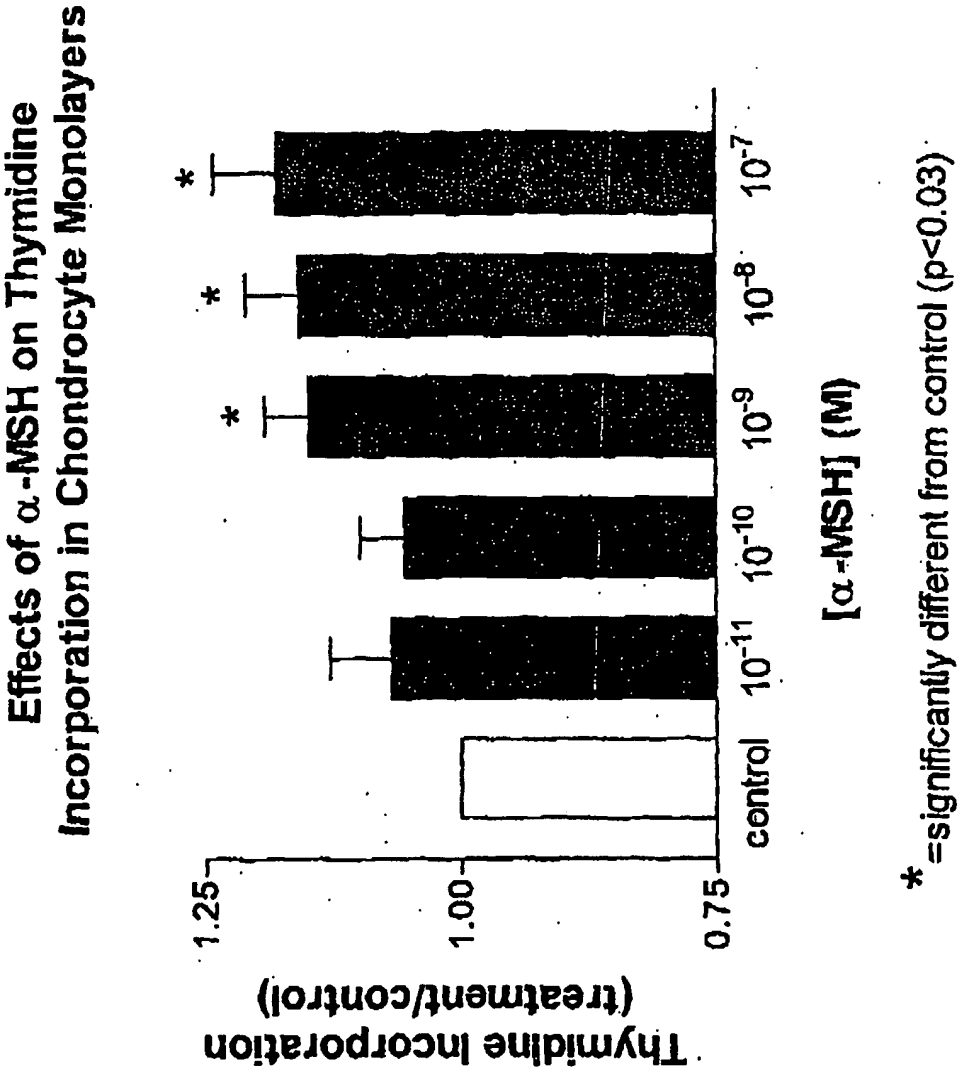
Figure 12B



Proteins changed by des-α-MSH treatment *Location of proteins of interest (black-squares) on the reference gel. Numbers correspond to protein labels on the reference gel. Significant increase ($p<0.05$, Mann-Whitney U test) in protein expression in des-α-MSH treated group is labeled in blue, decrease in red. Underlined protein p611 expression also significantly changed in α-MSH treated group.*

Figure 12C

FIG-13.


Effects of α-MSH on Thymidine Incorporation in Chondrocyte Monolayers
Thymidine Incorporation (treatment/control)
1.25
1.00
0.75
control
10-11
10-10
10-9
10-8
10-7
[α-MSH] (M)
*
*
*
*=significantly different from control (p<0.03)

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